FIELD-READY

Command Console SL

User Manual

Z Microsystems

FCC INFORMATION

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO, DO NOT USE THIS UNIT'S POLARIZED AS PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS UNLESS ALL THREE PRONGS CAN BE FULLY INSERTED

1. Use the power and video cables supplied with the product to help prevent interference with radio and television reception. The use of cables and adapters may cause interference with electronic equipment in the vicinity of this unit.

Command Console — SL —

2. Changes or modifications not expressly approved by Z Microsystems could void user's warranty.

CAUTION

RISK OF ELECTRIC SHOCK - DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK OF UNIT). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

This symbol warns the user that insulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore it should be read carefully in order to avoid any problems.

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ABOUT MANUAL

This Manual is also available on the Z Microsystems website (www.zmicro.com). We recommend you read this manual carefully and follow the instructions in the Installation chapter for verification of system functions and control settings.

Safety Precautions

DANGER:

To avoid shock hazard:

- *Do not remove the covers around the Command Console*
- *Do not connect or disconnect the Command Console during an electrical storm.*
- *The power cord plug must be connected to a properly wired and grounded power outlet.*
- *Any equipment to which the Command Console will be attached must also be connected to properly wired and grounded power outlets.*

PRODUCT DESCRIPTION

The ultra-slim Command Console SL model is designed for rapid deployable applications and fits any 19” RETMA rack or transit case. The Command Console SL model brings together a 19” (1280 x 1024) flat panel display, a full size water tight keyboard and track ball all in only 1.75” (1U) height.

The Command Console SL model also solved cable retracting problems. An integral custom engineered articulating arm provides smooth cable management which eliminates cables from getting tangled and caught on other equipment as the Console is pulled in and out of the rack.

To further assure rapid deployment, dual quick-lock/release mechanisms hold the Command Console SL model firmly in the storage position and allow it to be quickly set up and operational. A custom torque adjustable hinge can be adjusted to hold the display securely at any viewing angle, in the most turbulent situations.

The Command Console SL model is manufactured entirely from lightweight, aircraft grade, CNC machined aluminum and finished with a tough, baked powder coating to provide the utmost strength, durability and light weight.

All configurations have the following “key features”:

- USB Connections or PS/2 Connections (connector clamp-down) for keyboard and TB.
- 88-key water tight keyboard.
- Three button sealed trackball
- 12-function keys and arrow keys.
- Fits 24in and 25in deep racks.

SHIPMENT CONTENTS

Ensure all of the following parts are included in the package received from Z Microsystems. Verify all parts have not been damaged during shipment. If any of the parts are missing or damaged, immediately contact Z Microsystems Customer Service at 858-657-1000.

- Command Console unit attached to the mounting plate
- Power Cable
- User Manual
- Video Cable
- Serial Cable
- Rack-mounting hardware

Remember to save the unit's original shipping materials. It may be necessary to move the unit at a later date.

Required Tools

- Phillips screwdriver, 2 pt.
- 5/16 wrench

Preparations

In preparation to install the Command Console, take the following precautionary steps:

Verify the Command Console power switch is OFF.

Do not connect or disconnect the unit during an electrical storm.

The power cord plug must be connected to a properly grounded power outlet.

Any equipment to which the unit will be attached must also be connected to properly wired and grounded power outlets.

NOTE: For the fastest and easiest installation of the Command Console, follow these steps in the sequence they are presented.

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HARDWARE INSTALLATION

Remove the outer rack mounting slide channels from the Console.

On the rear unscrew the left and right rear rack mounting brackets to free up the outer rack mounting slide channels from the Console.

Press the spring loaded Z Locks towards the middle to release the outer rack mount slide channels and at the same time slide the rack mounting block back.

Slide the channels back until they stop about half way back. This is a safety stop to prevent the Console from sliding out too far while mounted to the rack.

Simultaneously press in the first set of safety catches on each slide rail and slide the channel until the second safety catches stop the sliding action.

Simultaneously press in the second set of safety catches on each slide rail and slide the channel all the way off the back of the Console.

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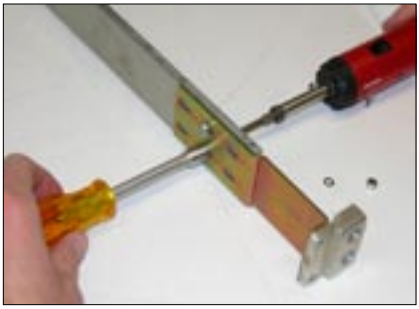
Install Rails

Both outer rack mount slide channels should be separated at this time.

The slide channels come pre-assembled to fit a 24” deep rack. To fit a 25” rack, the



rear mounting bracket can be repositioned as shown here.

To mount the channels on the front of the RETMA rails (in most cases), use two 10-32 Phillips screws...

on each side to secure the Z-Lock mounts.

Be sure to press the slide rail flat against the RETMA rail as you tighten the screws.

On the rear of the cabinet frame, also use two Phillips screws on each rail to secure.

On the slide rails, using a screwdriver and wrench, tighten the slide extension rail screw. Repeat on each side.

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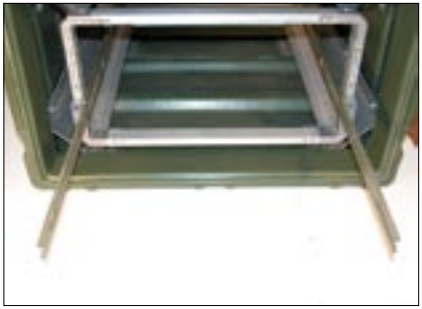
Install Console



Pull the two Console inner members of the slides out until they lock in the second lock position.

Hold the Console with the front toward you and as horizontal as possible. NOTE: In the next step, be sure to carefully support and guide the power supply at the rear of the Console.

Guide the Console's inner slide member into the middle slide member, and gently slide the Console into the slide assembly until it stops. This may require a second person to support the power supply.

Press in the first set of catches on each slide and slide the channel until the second safety catches stop the sliding action.

Simultaneously press in the second set of safety catches on each slide rail and slide the channel all the way off the back of the Console.

From the back of the rack, gently guide the power supply toward you.

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Secure the power supply to the right rear of the Console, using #8-32 x .75”L screws.

Secure the left side also, as shown above.

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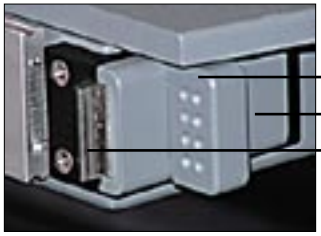
Z Locks Description

The mechanical principle of the Z Locks is similar to spring-loaded dead bolts.

Two stainless steel compression springs in each lock press against the bolt so that it will not come loose even with substantial force.



Push Tab

Slide cover

Spring loaded catch

Slide body

Left and right units are identical

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Setup Console

To pull out the Command Console, place your hands so that your palms face upwards.

Your thumb should be on the tab of the lock and the first three fingers are under the pull-out bar.

Push the tabs towards each other and with your fingers pull out the Console until the first safety catch stops the slide action.

Press both slide catches inward and pull the Console out. Allow the Console to stop at the second catch.

To raise the display into viewing position, locate the lockdown latch on the...

right top corner of the tray. Slide the tab with the right hand to the right and lift simultaneously the display with the left hand...

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...into viewing position.

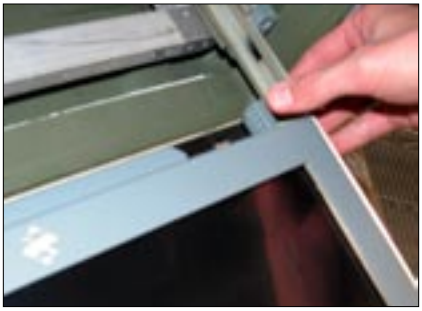
Push unit into the first locking position of the slides.

Close Console

To fold down the Console, pull out the Console fully from the rack

Stand slightly to the right of the unit and lower the panel down on its back into the tray.

With the right hand pull back on the tab of the lock down mechanism.



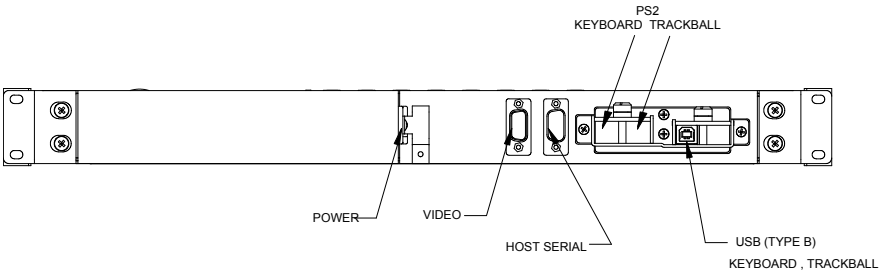
Lay the panel fully down and release so that the panel becomes locked in the horizontal position.

Disengage the slide lock from the second slide lock position. Push the Console into the first slide lock position.

With a Thumb on the left and right tab of the Z Lock, slide the Console into the rack and press on the tabs to open the locks. Push into maximum seated position and release the locks.

CABLE CONNECTIONS

The connections panel may vary due to non-standard configurations. The following configuration shows both PS2 and USB cable connections on one sample. In most cases, the Command Console will utilize just one of these connector types.



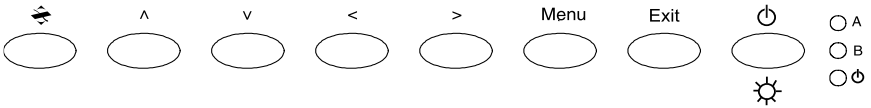
POWER UP

When the Command Console is connected, apply power and ensure the main screen appears. If the display does not turn on within ten seconds, press the Standby button on the display panel upon completion of cabling. If the main screen does not appear after hardware and cabling installations are complete, consult the Troubleshooting section of this manual.

DISPLAY PANEL CONTROLS

The Command Console features push-button controls on the lower front of the front bezel. To setup the display, use the following controls to fine tune the image on the screen:

NOTE: The following procedures are written for setup using the buttons on the display panel. See the "SoftMenus" section of this manual for remote setup.



Button functionality description table:

Main Display	Auto Adjust "Z"	^	v	<	>	Menu	Exit	⏻
Key Functions; KVM offers dual function	Auto Position; KVM offers dual function	Move up through menu functions; KVM offers dual function	Move down through menu functions; KVM offers dual function	Move left to adjust value of function; KVM offers dual function	Move right to adjust value of function; KVM offers dual function	Activates menu and menu functions; KVM offers dual function	Exit from main menu or return from sub-menu to main menu; KVM offers dual function	Hold down to turn backlight on and off; press briefly and repeatedly to increase or decrease backlight brightness

Channels

A — Green — VIDEO A is selected

B — Green — VIDEO B is selected

If A & B are both green, it indicates the Channel Auto Switching function is selected.

⏻ — green — power and signal

orange — power and no signal

off — Standby mode

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DISPLAY PANEL SETUP

This following section explains how to use the control buttons to adjust image clarity and image position on the screen. In particular it discusses:

- The function of each of the push-button controls
- How to reset previously saved settings or return to factory settings
- Tips and techniques

NOTE: The control buttons allow the user to control backlight operations; to store settings, and to revert to factory-saved settings.

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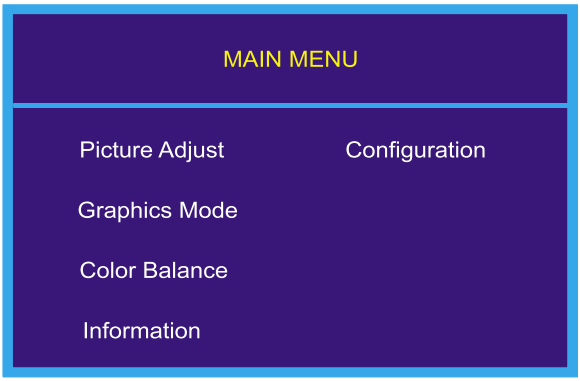
ONSCREEN MENUS

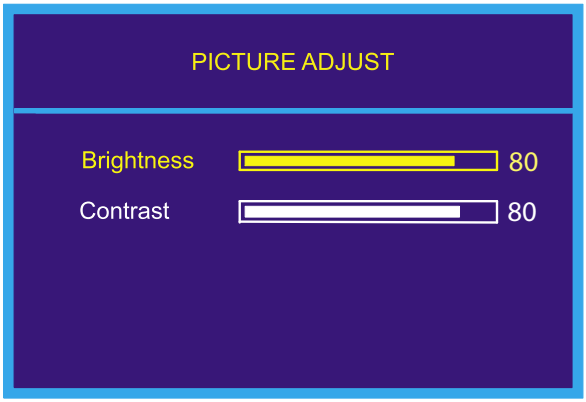
To access the onscreen display main menu, press the menu button on the front of the panel. The Command Console's functions are controlled using the Main Menu's subtopics.



These submenus can be accessed using the Up and Down buttons on the display panel. See sections below for specifics regarding the submenus.

Main Screen Picture Adjust

Use the Up and Down buttons to highlight the "Picture Adjust" option. Press the "Menu" button to access the submenu.



Use the Up and Down Keys to highlight the desired option. Use the Left and Right buttons to increase and decrease the Brightness and Contrast characteristics of the screen. Press "Exit" to return to the Main Menu. The new adjustments will be applied automatically.

NOTE: Brightness of the main screen can also be adjusted without entering the Main Menu using the up and down display buttons.

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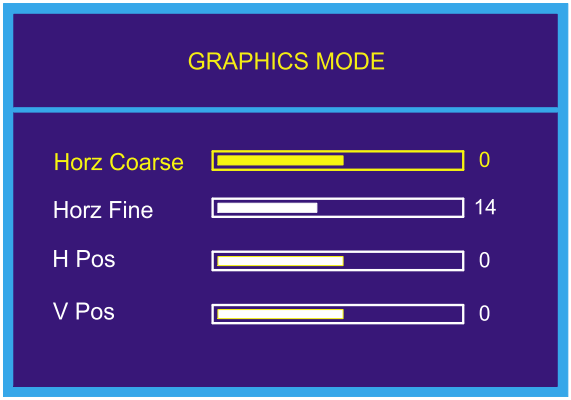
Main Screen Graphics Mode

Use the Up and Down buttons to highlight the “Graphics Mode” option. Press the “Menu” button to access the “Graphics Mode” submenu.



“Graphics Mode” is used to adjust the positioning of the image. Use the Up and Down Keys to highlight the desired option. Use the Left and Right buttons to adjust the following modes: Horz Coarse, Horz Fine, H Pos, and V Pos.

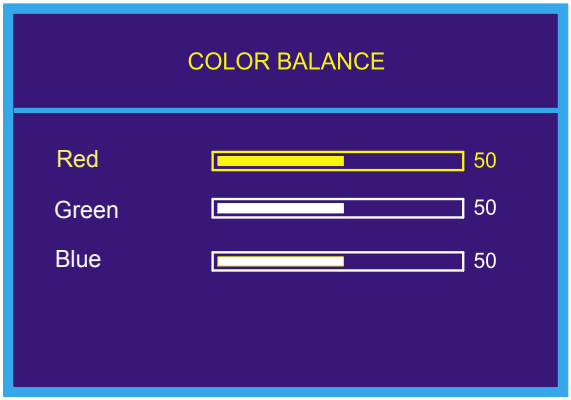
The “Horz Coarse” option adjusts the horizontal width of the image.

The “Horz Fine” option adjusts the phase of the video sampling clock.

Press “Exit” to return to the Main Menu. The new adjustments will be applied automatically.

Main Screen Color Balance

Use the Up and Down buttons to highlight the “Color Balance” option. Press the “Menu” button to access the “Color Balance” submenu.



Use the Up and Down Keys to highlight the desired option. Use the Left and Right buttons to adjust the colors of the screen image.

Press “Exit” to return to the Main Menu. The new adjustments will be applied automatically.

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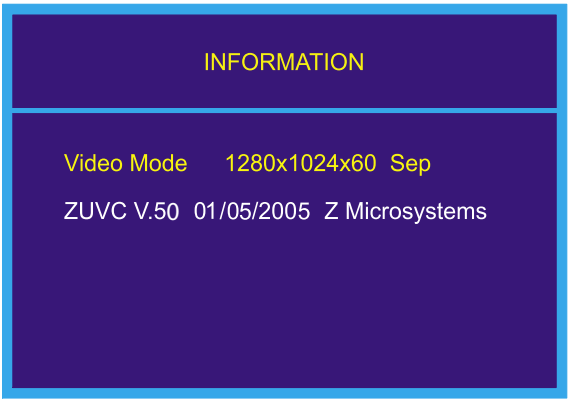
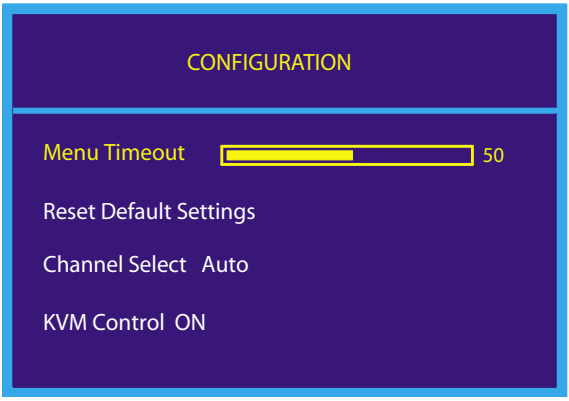
Main Screen Information

Use the Up and Down buttons to highlight the “Information” option. Press the “Menu” button to access the “Information” submenu.



Within this submenu, view the video mode resolution, the refresh rate, and the sync mode. Press “Exit” to return to the Main Menu. The Firmware Version and Build Date are also available on this screen.

Main Screen Configuration



Menu Timeout:

The menu timeout is the amount of time the menu will appear while not in use before it times out. When the menu times out, it disappears from the main screen. Select with Up and Down keys and adjust with the Left and Right keys.

Reset Default Settings:

Resets all Main Menu settings to the factory default settings. Select and press the Menu button.

Channel Select Auto:

The Channel LEDs on the front panel display buttons reveal the active channels, as well. See the section regarding “Controls” for more details on the channel LEDs.

The Command Console has two channel options. Highlight “Channel Select” and use the Left and Right keys to change channels. If both channels have been configured for use, the following options are relevant:

AUTO: Automatically selects the available channel.

CHANNEL A: Allows the operator to choose Channel A as active.

CHANNEL B: Allows the operator to choose Channel B as active (channel B is optional--not standard).

KVM Control (see KVM on screen on previous page):

Toggles ON/OFF to apply or remove preset KVM command features. The preset commands are programmed as alternate functions of the firmware buttons on the front of the panel. For predefining the KVM character strains, please refer to SoftMenu instructions regarding KVM Control.

NOTE: When the KVM Control is turned ON, the Main Menu requires the button be held down for extended length of time to be made active.

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SOFTMENUS™

SoftMenus™ are control panel dialog screens accessed from the host computer, allowing flexibility where positioning and environmental demands are a concern.

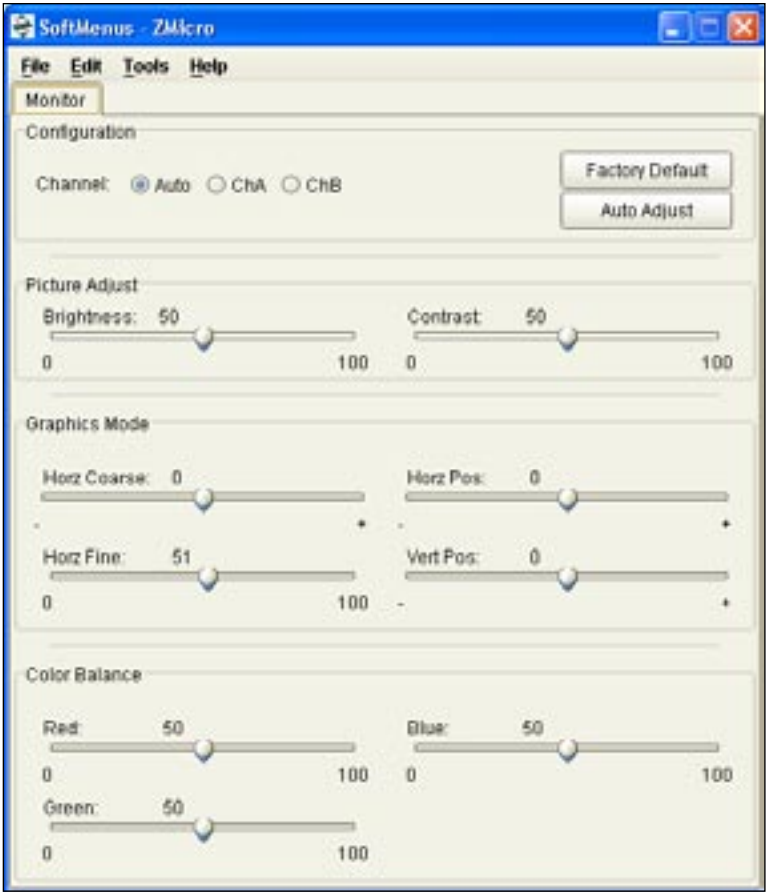
In order to access the SoftMenu™ features, the host serial port must be accessed at the rear of the Command Console. The Command Console must be connected to the computer and software must be installed.

The following initializing screen will appear as the SoftMenu™ software is launched:

Clicking on the “Exit” button will cancel the SoftMenu™ program from opening.

Monitor SoftMenus™

The Monitor SoftMenu™ dialog screen allows the operator to adjust Channel Configuration activity, Default settings, Auto Adjust, Brightness and Contrast characteristics, Coarse and Positioning range, and Color Balancing of the main screen image in one easy-to-use menu.



Monitor Screen "Factory Default" and "Auto Adjust" Buttons

To adjust the monitor screen settings, the "Monitor" tab must be active.

By clicking on the "Factory Default" button, all settings will automatically reset to the prescribed factory default values. The "Auto Adjust" feature automatically adjusts the RGB image to fit the screen.

MENU BAR

The SoftMenus' menu bar also includes the "Edit" and "Tools" drop-down menus. Left click on any of the following drop-down menus:

File

Load previously saved display settings and save settings in the "File" drop-down menu. Multiple users may wish to alter the settings individually with this feature.

Edit

Manage, add, and remove the ports used by SoftMenus for communication with the "Edit" drop-down menu.

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Tools

Tools are available to further enhance the SoftMenus. KVM Setup can be controlled from this location. See the next page for details on the KVM Control option.

Help

Utilize the software “Help” settings to read about the version of the unit, as well as information about Z Microsystems.

HOT KEYS

Hot Keys are only available on the Linux and Windows versions of Z Microsystems’ software. The following combinations of “hot” keys have been customized for ease of use of the Command Console.

Ctrl + B

Press the “Control” and the “B” keys simultaneously to turn up the main image’s brightness in small increments.

Ctrl + I

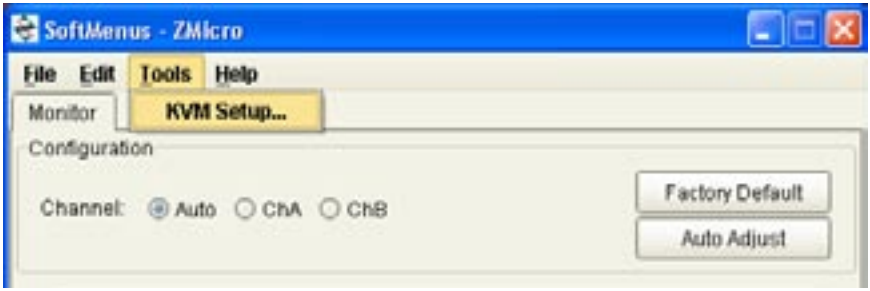
Press the “Control” and “I” keys simultaneously to toggle between all available channels.

NOTE: The panel will only allow a channel with active input to be selected.

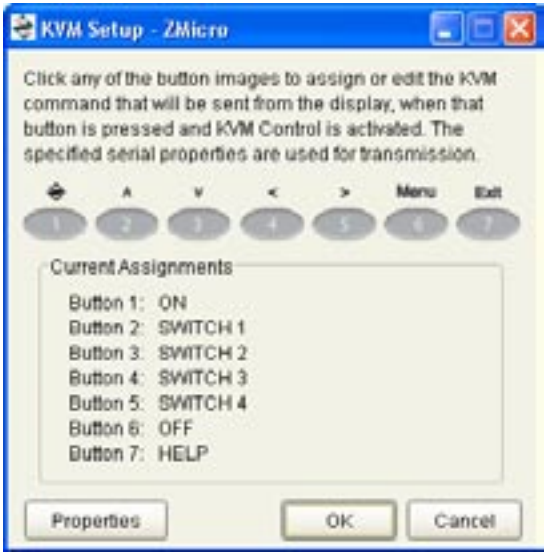
KVM Control

The SoftMenus KVM Control feature enables the display to communicate with the KVM over the serial port. The ASCII string assignments can only be configured through Soft-Menus.

To assign or alter the ASCII strings, click on the SoftMenus' Tools drop-down menu.



Left click on the "KVM Setup" option and the following screen will appear:


KVM Setup - ZMicro
Click any of the button images to assign or edit the KVM command that will be sent from the display, when that button is pressed and KVM Control is activated. The specified serial properties are used for transmission.
Menu
Exit
Current Assignments
Button 1: ON
Button 2: SWITCH 1
Button 3: SWITCH 2
Button 4: SWITCH 3
Button 5: SWITCH 4
Button 6: OFF
Button 7: HELP
Properties
OK
Cancel

The button images map to the physical buttons on the display panel.

Click on the buttons corresponding to the desired string to gain access to the assignment screens.

Click on the "Properties" button to specify the serial port configuration the display should use to communicate with the KVM.

Click the "OK" button to save the settings and exit from the KVM Setup screen. Click the "Cancel" button to exit from the KVM Setup screen without saving the changes.

NOTE: The exact ASCII strings and serial port properties are defined by the KVM manufacturer. See the KVM manufacturer's documentation to assign the ASCII string.

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MAINTAINING THE COMMAND CONSOLE

WARNING: Be sure to turn off the power before you perform any maintenance on the monitor.

WARNING: To avoid risk of electric shock, do not disassemble the monitor cabinet. Users cannot service the monitor. User maintenance is restricted to cleaning as explained below.

CLEANING THE COMMAND CONSOLE

Unplug the Command Console from the power outlet before cleaning.

- To clean, lightly dampen a soft, clean cloth with water or mild detergent. If possible, use a special screen cleaning tissue or solution suitable for the Command Console.
- Isopropyl alcohol may also be used to clean fingerprints or smudges on the face of the monitor. First apply the alcohol to the soft lint-free cloth before wiping the monitor. Do not apply the alcohol directly on the monitor.

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TROUBLESHOOTING THE COMMAND CONSOLE

No Main Display Image

If there is no image on the main screen, a signal will appear on the screen that states, “No Input, Check Cable”. If the cable from the computer to the display is secure, determine the color of the standby LED and follow the appropriate procedure below.

Black

Problem:
If the standby LED is black, there is no power to the unit.

Recovery:

- Ensure the power cable is plugged into the source.
- Connect the power cable to a AC outlet. Ensure the AC outlet is active.
- Wake up the display by pressing the standby button.

Orange

Problem:
If the standby LED is orange, there is no video signal.

Recovery:

- If Video A or Video B is selected, ensure there is a video signal coming into the selected channel.
- Ensure there is a video signal coming from the computer.

Green

Problem:
When the standby LED is green, there is both power and a video signal. If there is no image on the main display, there is a possible hardware failure.

Recovery:

- Ensure the video signal coming from the computer is not a black screen.
- Contact Z Microsystems’ Customer Support Department.

Display Image Has Vertical Bars

If the main image begins to display vertical bars, adjust the “Horz Coarse”. From the Main Menu, use the Up and Down buttons to highlight the “Graphics Mode” option. Press the “Menu” button to access the “Graphics Mode” submenu. Use the Left and Right buttons to adjust the screen until the number of bars is reduced. Continue adjusting one step at a time until the bars are no longer visible.

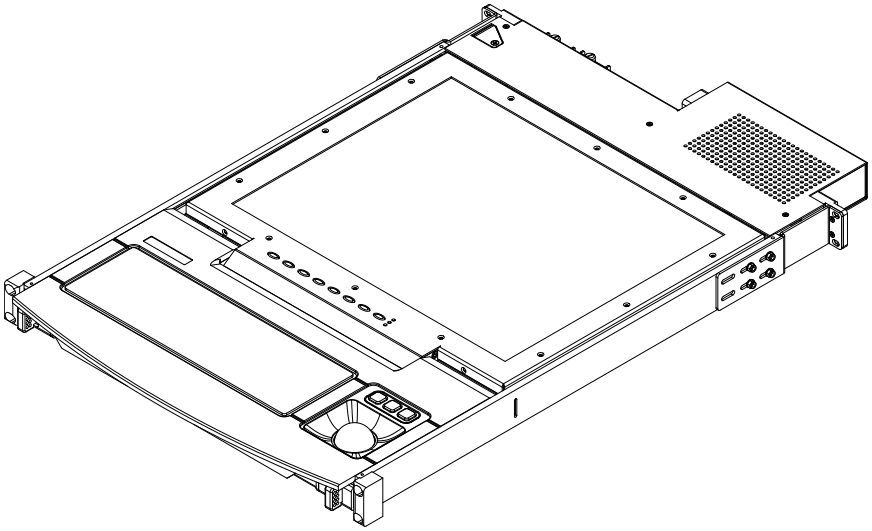
Display Image Appears Fuzzy

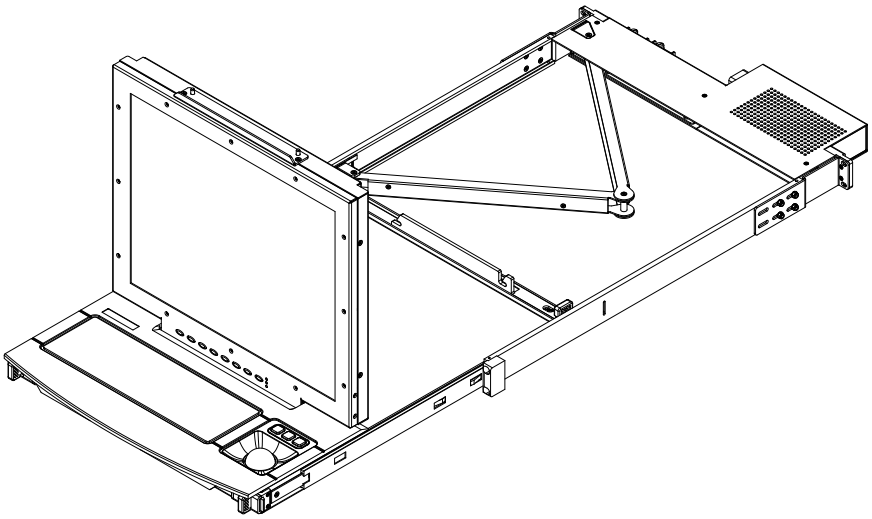
If the main image begins to appear fuzzy or “noisy”, adjust the “Horz Fine” until it is reduced. The “Horz Fine” option adjusts the phase of the video sampling clock. To access the “Horz Fine” submenu from the Main Menu, use the Up and Down buttons to highlight the “Graphics Mode” option. Press the “Menu” button to access the “Graphics Mode” submenu.

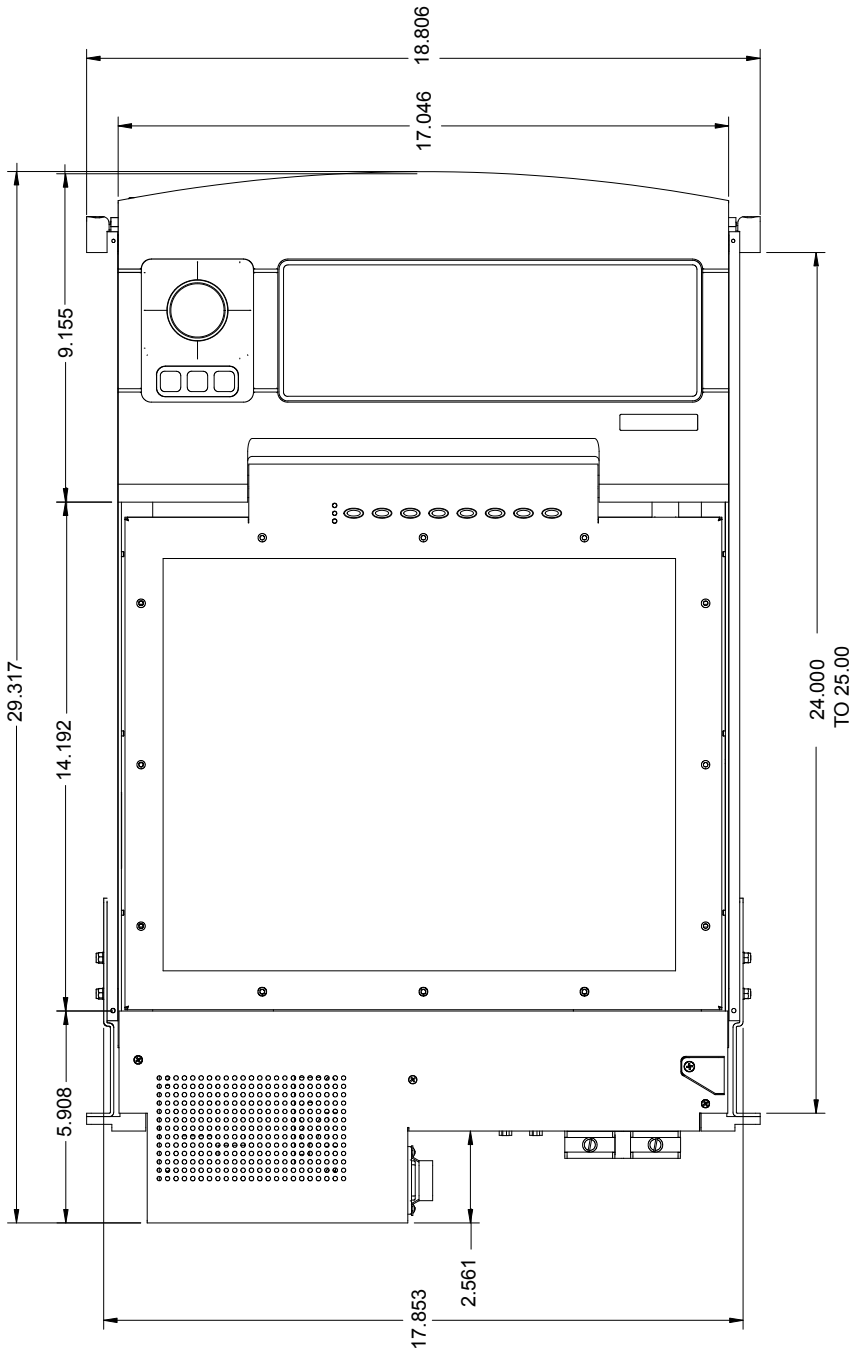
Power Light Does Not Illuminate

1. Check that power cable is properly connected to 110 VAC power supply.
2. Check that front panel power switch is on.
3. Check that power switch on back of Command Console display is on.

MECHANICAL OUTLINE FOR COMMAND CONSOLE







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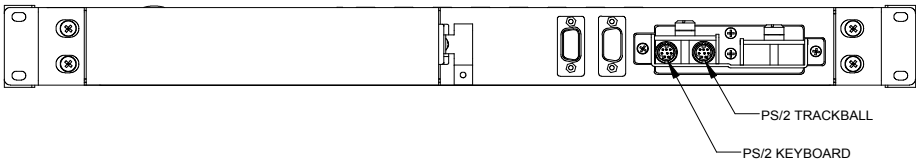
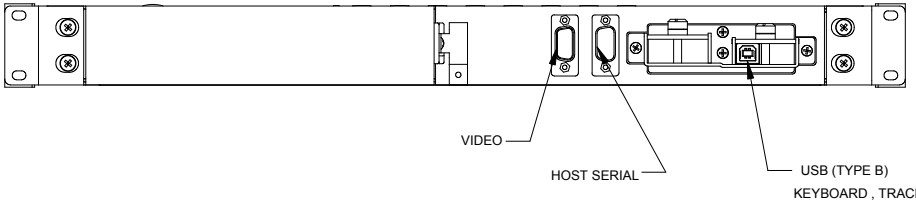
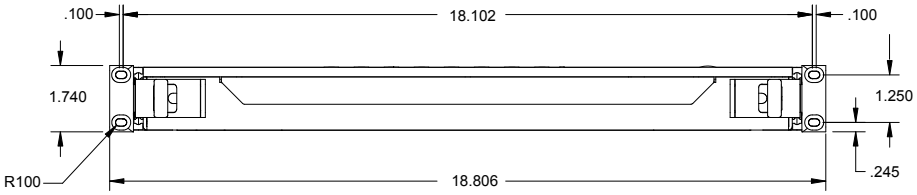
SCHEMATICS

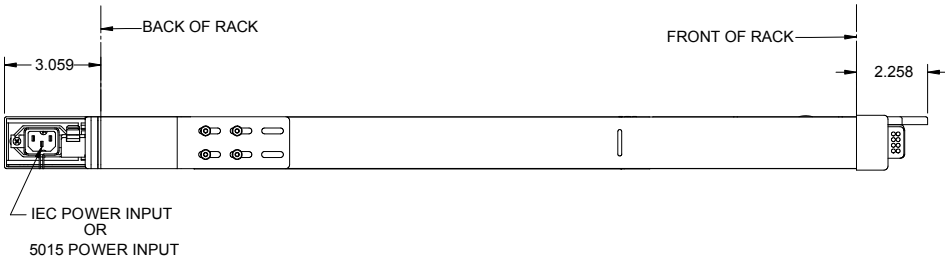
REAR VIEW
PS/2 VERSION



REAR VIEW
USB Version







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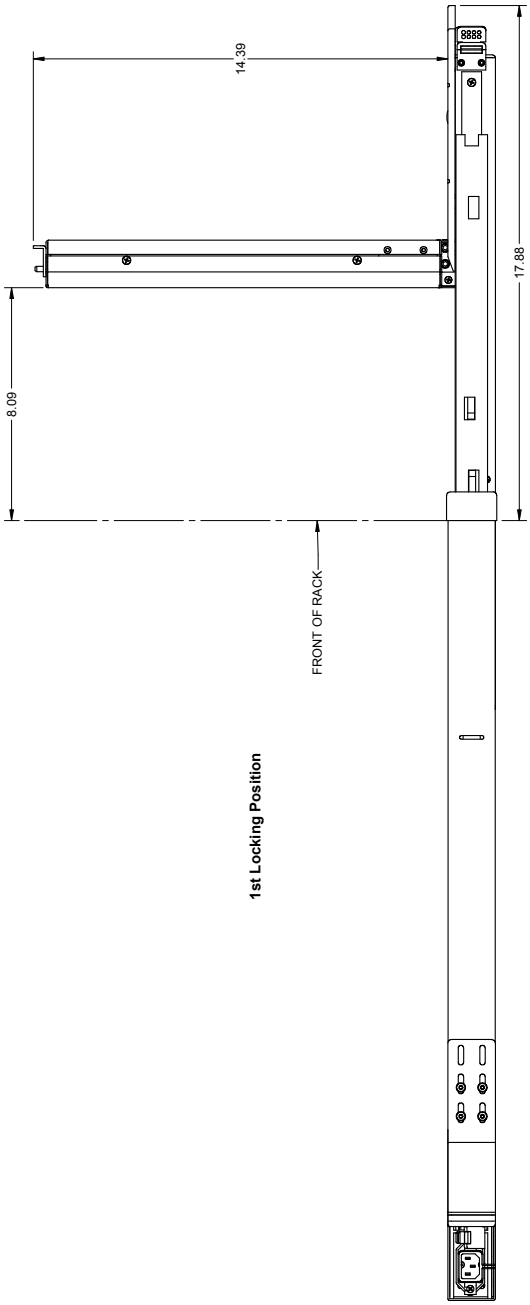
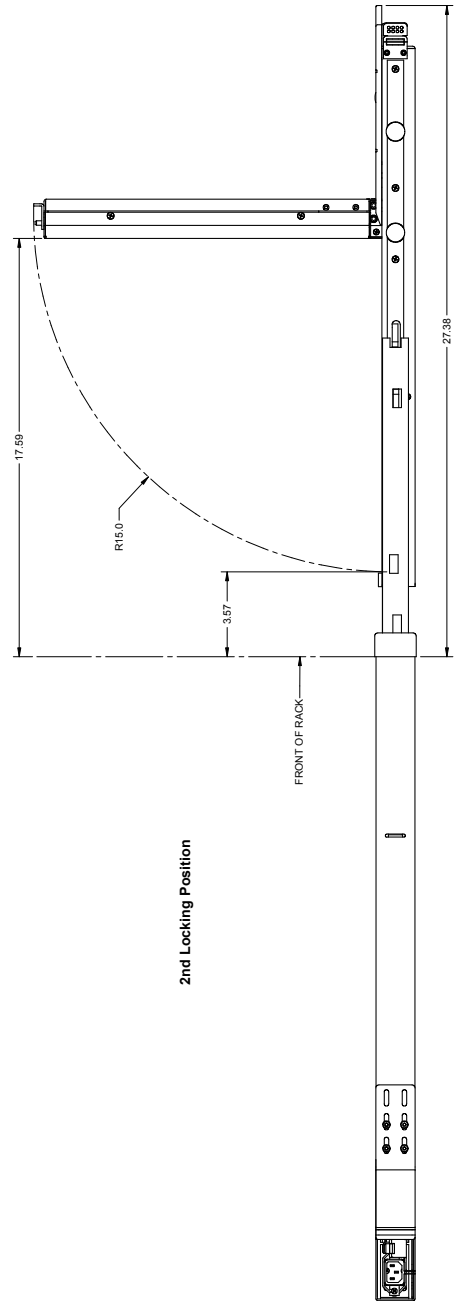


Doc# 27-0032UM Rev A Issued 07/05


27.38
17.59
R15.0
3.57
FRONT OF RACK
2nd Locking Position

REPLACING PARTS

If the Z Microsystems Technical Support Engineer determines that the product needs to be replaced, a Customer Service Representative will issue a Return Material Authorization (RMA) number.

An RMA number is required to return a product to Z Microsystems, regardless of the reason for the return.

The Z Microsystems Customer Service Department/RMA Request Form will ask the customer to provide the following information:

- model number
- serial number
- problem
- return “ship to” address
- the name and address of the company department to which we will send the invoice (if product is out of warranty or is different from the “ship to” address.
- phone number and e-mail address of contact
- purchase order number

You will be given an RMA number and will be asked to send the product to:

Z Microsystems
ATTN.: (RMA#) It is very important to reference the RMA#
5945 Pacific Center Dr., Suite 505
San Diego, CA 92121

SPECIFICATIONS FOR COMMAND CONSOLE

The Command Console is designed to host a choice of LCD's from several manufacturers based upon customer requirements. The specifications unique to each particular LCD vary from manufacturer to manufacturer. These particular specifications are available through our sales department.

General Display Specifications		
	Display size	19 Inch
	Resolution	Up to 1280 x 1024
	Color Palette	16.7 Million
	Contrast Ratio	700:1 (typ)
	Pixel Pitch	.294 mm x .294 mm
	Luminance	300 cd/m2 (typ)
	Viewing Angle	80°/80°
	Control	Control Panel or SoftMenu
	Optical Response Time	15 ms (typ)
Power		
	Power Consumption	60 W
	AC Power Supply	100-240 VAC input@50/60 Hz
Cables		
	Display Cable	6' cable, HD15
	Power Cable	6' cable, IEC or 6' cable, 5015
	Serial Cable	6' cable, DB9
Physical		
	Total Package Size	1.74" H x 18.81" W x 29.32" D
	Total Weight	26 lbs
Environmental*		
	Operating Temp	0° to 50° C
	Extended Operating Temp**	-20° to 50° C

	Non-Op Temp	-40° to 70° C
	Humidity	5%-95% Non-Condensing
	Operating Altitude	Up to 10,000 ft
	Non-Op Altitude	Up to 40,000 ft
	Vibration	MIL-STD-167
	Shock	MIL-STD 810E (Method 516) 30 g's
		MIL-S-901D (in isolated rack)
	Sand and Dust	5.5 MPH for 25 mins (display bezel, keyboard and trackball only)
	Drip	MIL-STD-810E (display bezel, keyboard and trackball only)
	Fungus	Non-Nutrients/Contaminants
Reliability		
	MTBF	Display: 20,000 hrs w/ backlight change at 10,000 hrs.
	MRRT	<30 minutes
	Safety	UL 1950 (used as a design guideline)
	EMI	MIL-STD-461E, RE101 (Army Limits), RE102 (Navy Fixed Limits), RS101, RS103, (20v/m 2MHz and 60v/m 1GHz-18GHz, CE101, CS114, CS115, CS116
	Quality/Workmanship	IPC/ISO 9001:2000 and applicable section of MIL-HDBK-454

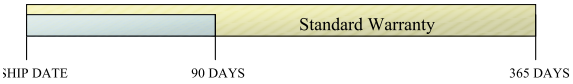
* Results of Environmental Tests pending

** Unit will power up and is legible at -20°C; backlight life is reduced

WARRANTIES

Standard Warranty

-no charge-



Z Microsystems' one-year Standard Warranty includes a 90-day AirSpare Service Plan. This means that if any standard Z Microsystems' product fails within the first 90 days after shipping, the customer will receive a new replacement.

All non-standard* products are covered for one year under Z Microsystems' Standard Warranty that includes free parts and labor. However, the 90-day AirSpare Plan can be purchased as an additional option for non-standard products.

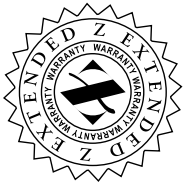
1-90 days - Z AirSpare Service

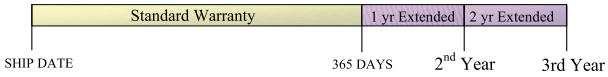
- 91-365 days - Free Parts and Labor
- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates

*a non-standard product is a prototype or a product specifically designed or engineered per a customer's specification

To return a defective product a customer can call the Z Microsystems Customer Service Department at 1-858-657-1000, ext. 232, or fill out the RMA Request Form on our website. Please see the section in this manual titled, "Replacements" for details on how to replace a part.

Z Extended Warranty





Z Microsystems' Extended Warranty Plan provides one and two year extended warranty options under which a Standard Warranty is extended from the end of the first year of the Standard Warranty period.

The One-Year Extended Warranty period will begin on the day the Standard Warranty expires and the Two-Year Extended Warranty begins when the One-Year Extended Warranty expires.

1-90 days - Z AirSpare Service

91-365 days - Free Parts and Labor

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates

2nd year - Free Parts and Labor

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates

3rd year - Free Parts and Labor

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates

Z Preferred Warranty

Z Microsystems provides a Preferred Service Plan under which Z Microsystems will repair or replace and return a defective product to the customer within one week of Z Microsystems' receipt of the defective product.

1-90 days - Z AirSpare Service

91-365 days - Free Parts and Labor

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates
- Guaranteed One Week Turnaround

2nd year - Free Parts and Labor

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates
- Guaranteed One Week Turnaround

3rd year - Free Parts and Labor

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates
- Guaranteed One Week Turnaround

Z Airspare Warranty

Z Microsystems provides an AirSpare Service Plan that will replace a defective product, within the first year of the warranty period, with a new product the following business day.* The AirSpare Service Plan does not cover special order items. A product may be deemed a special order item at the discretion of the Customer Service Department. Z Microsystems, at its discretion, may offer the AirSpare Service Plan to a customer who purchases a special order item at the one-year rate.

*Z Microsystems cannot guarantee next day delivery if contacted after 2:00 PM Pacific Time. Calls on Fridays or before holidays will receive a new product the following business day.

1st Year - 24 hour replacement

- 9-5 EST telephone technical assistance
- Online technical help
- Email product updates

2nd Year - 24 hour replacement

- 9-5 EST telephone technical assistance
- Online technical help
- email product updates

Z On-Site Service

Z Microsystems also provides on site service and consultation to customers who require Z Microsystems' technical expertise.

Disclaimer

Z Microsystems warrants that every product is free from defects in materials, workmanship and conforms to Z Microsystems' stringent specifications.

Z Microsystems calculates the expiration of the warranty period from the date the product is shipped. This means that the ship date on your invoice is your product ship date unless Z Microsystems informs you otherwise. During the warranty period, Z Microsystems will provide warranty service under the type of warranty purchased for the product.

Replacement parts will assume the remaining warranty of the parts they replace. If a product does not function as warranted during the warranty period, Z Microsystems will repair or replace the part (with a product that is as a minimum functionally equivalent) without charge.

If the product is transferred to another user, the warranty service is available to that user for the remainder of the warranty period.

Z Microsystems' warranties are voided if the covered product is damaged due to an accident or abuse. The warranty is voided if the product is shipped in sufficient packaging.

Under no circumstances is Z Microsystems liable for any of the following:

1. Third-party claims against you for losses or damages,
2. Loss of, or damage to, your records or data, or
3. Economic consequential damages (including lost profits or savings) or incidental damages, even if Z Microsystems is informed of their possibility.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from jurisdiction to jurisdiction.

Warranty does not take effect until full payment is received by Z Microsystems.

CUSTOMER SUPPORT

NOTE: For image problems, run AUTO SETUP again before consulting this section. In most cases, AUTO SETUP can fix the problems. See the Auto Setup section for details.

NOTE: If possible, stay by the computer. The Z Microsystems Technical Support Representative may wish to go through the problem over the telephone.

If you are unable to correct the problem yourself, contact:

Z Microsystems at:

(858) 657-1000
Fax: (858) 657-1001
Website: www.zmicro.com

Before calling, please have available as much of the following information as possible:

1. Model and serial number from the label on the monitor.
2. Purchase P.O.
3. Description of problem
4. Computer type and model
5. System configuration (hardware fitted, etc.)
6. System BIOS version number
7. Operating System and version number
8. Display driver version number
9. Video Adapter Type

NOTE: More help, late-breaking news and details of the latest accessories for these products may be found on the worldwide web at: http://www.zmicro.com

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CUSTOMER FEEDBACK

We value feedback on our products, their performance, problems found, and welcome all constructive suggestions. Please send such productive information in writing to:

Customer Service
Z Microsystems
5945 Pacific Center Blvd., Suite 505
San Diego, CA 92121

or www.zmicro.com

COMMAND CONSOLE SERIAL CONTROL ICD

The following serial port property settings must be in place in order for the host to have communication with the display.

SPEED	19,200 BPS
DATA BITS	8
PARITY	None
STOP BITS	1
FLOW CONTROL	None

The serial control ICD commands are presented here for the user's knowledge. The commands are written and controlled by Z Microsystems and are not intended for the customer to use. Any improper use of the commands may place the panel in an unstable state and may degrade the image quality, thereby voiding the warranty by the user.

Command Structure

The command structure for the majority of the commands for the display follow the following structure:

Z<space>U<space><command><space><argument>

where...

"command" = the ascii string that represents the command

"argument" = the optional argument to the command

"space" = ascii character 0x20

The command structure must be succeeded by a carriage return (0x0D).

The controller returns a string of tildes ('~') indicating that the command has been accepted and processed. Some of the commands return other information which will be specified on a per command basis.

Unless otherwise specified the command strings examined in this document must be placed in the above structure when being sent to the controller.

The commands will be broken down by the image on which it operates (i.e. the main image). There may be overlap between the different images and the commands that work on them.

Main Image—Standard Command Structure

The following commands operate on the main image.

PAA

Description
PAA has the controller perform its auto adjust algorithm. This often helps the main image properly position itself if an uncommon image stream is provided to the display.

Argument
No arguments.

PBB

Description
PBB adjusts the blue balance of the main images RGB setting.

Argument
The allowable range is 0-255 base10. The factory default is 128.

PBG

Description
PBG adjusts the green balance of the main images RGB setting.

Argument
The allowable range is 0-255 base10. The factory default is 128.

PBR

Description
PBR adjusts the red balance of the main images RGB setting. On certain displays, a low brightness setting can cause the backlight to fade to black before reaching “0”.

Argument
The allowable range is 0-255 base10. The factory default is 128.

PCH

Description
PCH selects the channel that the controller should check for input. There are two channels through which that input can be provided—channels A and B. The unit can also be placed in auto detect mode. The unit does not allow itself to be placed on a dead channel after it has acquired a signal. If the controller has a good signal coming in on channel A and the controller is told to listen to channel B and channel B has no signal the controller will switch back to channel A.

Argument
For Auto mode 66, channel A 88, channel B 99 all base10. Default is Auto mode.

Return
The channel being listened to is returned in the following syntax:

=<mode>~~~

where “mode” = {66,88,99}

PDS

Description
PDS has the display place all of the settings back to the factory defaults.

Argument
No arguments.

PHC

Description
PHC adjusts the horizontal coarse setting.

Argument
The allowable range is 0-255 base10. The factory default is 128.

PHF

Description
PHF adjusts the horizontal fine setting.

Argument
The allowable range is 0-248 base10. The factory default is 119.

PHP

Description
PHP adjusts the horizontal position of the image.

Argument
The allowable range is 76-180 base10. The factory default is 128.

PIC

Description
PIC adjusts the images constrast.

Argument
The allowable range is 0-255 base10. The factory default is 128.

PUA

Description
If the display has been asked to auto adjust with the **PAA** command the PUA restores the display's image prior to the auto adjustment.

Argument
No arguments.

PVP

Description
PVP adjusts the vertical position of the image.

Argument
The allowable range is 106-150 base10. The factory default is 128.

Non-Standard Command Structure

The following commands do NOT use the standard command structure. They are sent “as is” to the controller, succeeded by a carriage return (CR).

EPROM SAVE

Description
EPROM SAVE instructs the controller to store the display settings. The stored settings will be used by the display when power is cycled until new settings are stored. This command must be issued if any changes to the settings are made and the changes need to be maintained between power cycles.

Argument
No arguments.

Z Microsystems, Inc.
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San Diego, CA 92121
Phone: (858) 657-1000
Fax: (858) 657-1001
Website: www.zmicro.com
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